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Pekka Pankka* (pekka.pankka@helsinki.fi), P.O. Box 68 (Gustaf Hällströmin katu 2b), 00014 Helsinki, Finland, and **Juan Souto**. *Non-existence of certain branched covers*.

In geometric mapping theory, closed manifolds receiving quasiregular mappings from an Euclidean n -space is an intriguing class of non-hyperbolic manifolds. All known examples of manifolds of this type are obtained by explicit constructions using branched covering mappings from tori.

I will discuss how the maximal de Rham cohomology in some intermediate dimension of the target manifold prevents an existence of a branching branched covering map from a torus of the same dimension. This result rules out the possibility of having a Rickman type example of a quasiregular mapping from the \mathbb{R}^4 to connected sum of three copies of $S^2 \times S^2$ that factors through the 4-torus. This is joint work with Juan Souto. (Received January 16, 2011)